

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015162**Date Inspected:** 21-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder(OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY- 1

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) buttering welding of Traveler Rail 21TR3-001. Welder is identified as 215397. ZPMC Quality Control (QC) is identified as Mr. Xiang Feng Feng. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair-1. The buttering was been performed as per the Critical Welding Report (CWR) No: B-CWR1568.

ZPMC Personnel performing Heat Straightening for the Traveler Rail (TR) 20TR1-025. Heat straightening was being performed appeared to comply with the Caltrans Engineer approved Applicable HSR Repot# HSR (B)-363 Rev.No:1. ZPMC Quality Control (QC) is identified as Mr. Ai Wei.

BAY- 2

ZPMC Personnel performing Heat Straightening for the Traveler Rail (TR) 20TR1-008. Heat straightening was

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being performed appeared to comply with the Caltrans Engineer approved Applicable HSR Repot# HSR (B)-370. ZPMC Quality Control (QC) is identified as Mr. Cai Xiao Fang.

FCAW of weld joint FB3191-001-023/024. Welder is identified as 067079. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

FCAW of weld joint FB3187-001-0017/018. Welder is identified as 067947. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

BAY- 3

FCAW of weld joint FB3138-001-053 and 054. Welders are identified as 208035 and 214945 respectively. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132-F.

FCAW of weld joint FB3142-001-008/009. Welder is identified as 052696. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132-F.

During the Quality Assurance (QA) random in process observations of the fabrication of Orthotropic Box Girder (OBG) Floor beam FB3121A, this QA Inspector observed ZPMC removed Seismic Performance Critical Material (SPCM) welds without Engineers approval as required per American Weld Society (AWS) D1.5 2002 section 12.17.3. The weld joints are identified as FB3121-001-108, 109, 123 and 124. Additionally this QA Inspector observed ZPMC has refit the two stiffeners and commenced re-welding them to the web plates of this floor beam without properly preparing the weld joints. Base metal that was removed from the edges of the stiffeners during the gouging operation has not been repaired and cleaned prior to re-fitting and welding. This QA measured the depth of the gouged areas of the edges of the stiffeners to be approximately 6mm.

This QA Inspector generated an incident report on this date for the above issue, for further information see the incident report and the attached photos.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 006025.

Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Floor beam weld Component. Total number of welds UT Tested: 07 No's. The weld designations are review as follows:

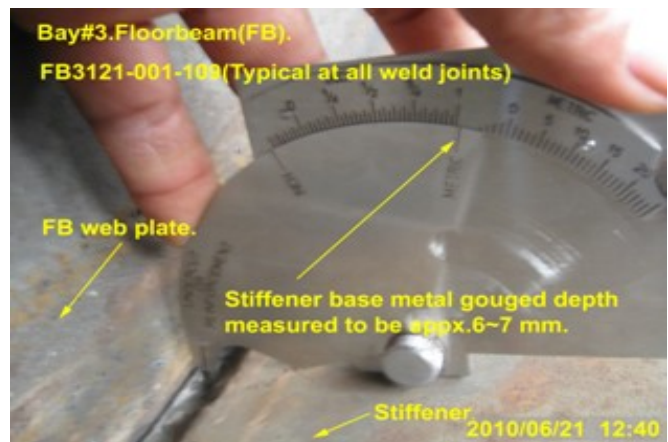
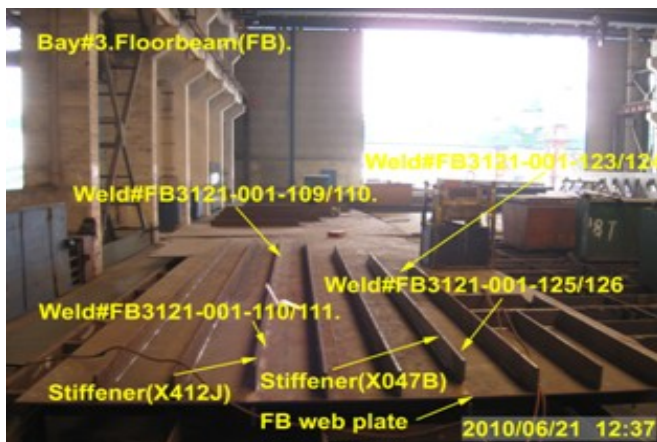
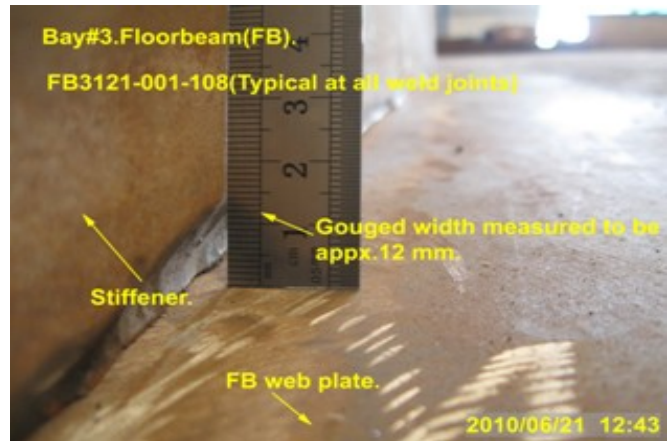
1. FB3123-001-001~007.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

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documents.



Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for

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your project.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

Reviewed By: Hall,Steven

QA Reviewer